



**U.S. ARMY COMMUNITY & FAMILY
SUPPORT CENTER - USACFSC**
Financial Management Directorate



**INSTRUCTIONS FOR COMPLETING THE FY 2002 NONAPPROPRIATED
FUND (NAF) MAJOR CONSTRUCTION FINANCIAL RETURN ON
INVESTMENT (ROI) TEMPLATE.**

A. INTRODUCTION

1. The Project Validation Assessment (PVA) requires the use of the **FY 2002 NONAPPROPRIATED FUND RETURN ON INVESTMENT TEMPLATE** to compute a return on investment (ROI) analysis on the proposed project. The ROI template utilizes Lotus 1-2-3 \ Excel software and requires formulating pro forma income statements, calculating the net present value (NPV), internal rate of return (IRR), and accounting payback period, as well as providing program and Installation Morale, Welfare, and Recreation (IMWRF) historical data. **NOTE: USE ONLY NONAPPROPRIATED FUND COSTS TO CALCULATE THE ROI.** APF support should be included on the template for information purposes and for later use on the Construction Review Board Prioritization Matrix to rank competing projects.

B. SCHEDULES

1. The template consists of the following schedules:

SCHEDULE	DESCRIPTION
Schedule A & A1	Summary Statements
Schedule B1	Projected Design and Construction Costs
Schedule B2	Projected Cash Outflows for Renovations and Furniture, Fixtures, and Equipment (FF&E)
Schedule C	Projected Annual Cash Inflows
Schedule D	Historical Data – IMWRF
Schedule E	Historical Data – Program
Schedule F	Five Year Pro Forma Income Statement
Schedule G1	Incremental Impact Statement
Schedule G2	APF Direct / Indirect Support
Schedule H	Net Present Value (NPV) / Internal Rate of Return (IRR)
Schedule I	Cumulative Cash Inflows and Payback Periods
Schedule J	Present Value of One Dollar at Various Interest Rates
Schedule K	Inflation Indices
Schedule L	Summary Overview

New



Schedule M

Sensitivity Analysis - Construction Costs

2. The cells in each schedule are formatted to insert dollar signs, commas, and percentages (as appropriate). All cash projections must be entered in today's dollars WITHOUT INFLATION (i.e., constant dollars) unless otherwise noted (e.g., DD Form 1391 Construction Cost Estimate). The template has been formatted to automatically add inflation (except where noted) to the entered data. The size of cells requiring narratives may require words to be abbreviated. A discount rate of 6.5%, an inflation rate of 3.5%, and a 32 year life cycle with no residual value (design and construction time plus a 30 year operating life) are assumed for the ROI analysis.

C. EXPLANATION OF TERMS

1. Discounting

Dollar costs incurred in different years are not comparable due to the time value of money. The discounting process used in the ROI Template adjusts dollar amounts so that costs incurred in different years can be meaningfully compared. The adjustment is made as dollar amounts paid or received at later years are less significant than the same dollar amount received or paid now. Discounting converts future values to present values. This worksheet uses the end-of-year convention.

2. Compounding

This is the opposite of discounting. In compounding, such as investing dollars in a bank account, an interest rate is applied to the initial dollar amount for the number of years indicated. Compounding converts present values to future values.

3. Current Dollars

The use of dollars in terms of the year stated, i.e., no adjustment is made to eliminate the effects of inflation. Used in the calculation of internal rate of return.

4. Constant Dollars

The expression of dollars in terms of a base year, e.g., FY 00 dollars. Constant dollars are current dollars for which inflation has been factored out.

5. Net Present Value (NPV)

This calculation is used to evaluate future cash flows associated with the investment. The calculation is premised on the concept that cash received in future years is not equal to today's dollars due to the time value of money. Using the discounting technique in the worksheet, the cash flows (in and out) are put on a comparable basis.

A positive NPV indicates that after paying for the cost of money the major construction project is increasing the value of the IMWRF by that amount of money and thus providing a greater return than the cost of the money. Conversely, a negative NPV indicates that the project will return less than the cost of the moneys invested, i.e., the cash flow over the project life is not sufficient to cover the cost of money.

6. Internal Rate of Return (IRR)

This measurement shows the rate of return of our proposed major construction project investment and produces a discount rate, which equates the present value of the cash inflows with the present value of the cash outflows.

7. Accounting Payback

The worksheet calculates the time required to payback or recover our investment in the project through operating cashflow. This calculation, unlike the NPV, ignores the time value of money.

D. PROJECT CLASSIFICATION GUIDELINES

Two categories are used to classify construction projects.

1. PROJECT CLASSIFICATION "0" - NEW BUILD

Classification "0" uses the total sales/revenue and net income before depreciation (NIBD) approach to calculate metrics such as NPV, IRR and accounting payback. In utilizing the total NIBD approach, no recognition is given to current financial data, if it exists, for the program. The financial analysis, in the ROI template, is made only for the NEW program. This project designation should not be used for an existing program, without a full justification. Examples of a NEW Project are:

NEW BUILD PROJECT		Use "0" in template
1		New facility for a program being offered for the first time.
2		Program currently offered which must vacate its residence.
3		New installation requiring MWR facilities.
4		Category C program currently operated at a loss.
5		Current facility is condemned.

2. PROJECT CLASSIFICATION "1" - ADDITION, RENOVATION, or REPLACEMENT

Classification "1" uses the incremental NIBD approach. The decision to build a new facility for a program that meets the criteria below is based on the ROI analysis incorporating only the incremental difference in cashflows between staying in the old facility and the projected cashflows generated by the improved

one. The analysis is based on the CURRENT program and all of its financial data. This result is then compared to the pro forma income statement for the program, after construction is complete. The template will calculate the incremental differences and use these measurements. Classification “1” is the most commonly used category in our ROI analysis.

Examples of a REPLACEMENT Project are:

REPLACEMENT PROJECT Use “1” in template	
1	Expansion of current facility.
2	Renovation of current facility.
3	Replacement of current facility.
4	Consolidation of programs into a new facility.
5	New facility for an on-going program.

E. GUIDANCE ON COMPLETING WORKSHEET SCHEDULES

1. Please use the following procedures for completing the schedules in the CFSC ROI Template:

a. Schedule A: Start at cell B5 and enter the name of the submitting installation or community. Enter the fund type, normally “IMWRF” (Installation Morale, Welfare, and Recreation Fund) in cell B7. Enter the project name, e.g., bowling center, in cell B9. Enter the program and location code(s) in cell B11. The installation name and project name will automatically transfer to all the other schedules. In cell B12 enter a “0” for a new project or a “1” for an addition, renovation, or replacement (see paragraph D. above). Go to cell B16 (cell B17 if the project is for land improvements) and enter the “rounded” construction cost from the front page of the DD Form 1391. Funding amounts should be entered under the appropriate sources in cells B23 and B24. The rest of this schedule will be completed by the formulas in the template as data is entered into other schedules.

b. Schedule B1: (1) No input necessary for this schedule.

(2) Schedule B2: Cash projections for two renovations must be entered in project years 13 and 23. This schedule will also allow for additional renovations (or different renovation years) as deemed necessary or appropriate by the community’s construction planners. Enter a projection for the initial set-up of the capitalized furniture, fixtures and equipment (FF&E) requirements in cell I25 and projections for the remaining annual FF&E requirements in cells I26 through I54.

c. Schedule C: No input is necessary for this schedule.

d. Schedule D: Enter the IMWRF income statements, for the past 3 fiscal years, at the level of detail requested. If **FY 00** year-end data is not available, use budget data for the missing months or extrapolate year-to-date (YTD) actual data and estimate the year-end, whichever is more realistic.

e. Schedule E: This schedule is the same as Schedule D except use program data instead of IMWRF data.

f. Schedule F. This schedule requires the contractor to project program operating income and expenses (IN CONSTANT DOLLARS, I.E., WITHOUT INFLATION) for the first five years of operation after the major construction project is completed (operational). In developing this forecast, the PVA contractor should include, in the PVA report, a complete step-approach showing how each element of the income statement is developed, taking the reader of the PVA report from the present program results to the results after construction is complete and the program is functional. A tabular approach is recommended to fully depict this step-approach. NOTE: Annual depreciation expense will be calculated automatically.

g. Schedule G1: (1) No input is necessary for this schedule.

(2) Schedule G2: The appropriated fund (APF) cost information shall be provided to the PVA contractor by the installation DCSRM office at the level of detail requested in the ROI template. The required information can be found in part 4: section 3: Morale/Welfare Support, of the 218 report, AVK 540. Along with your request, you must provide the following information: Identify the MWR program code for which the facility will be constructed (e.g., JB - Arts & Crafts, JC - Auto Crafts, HC - Recreation Center, etc.), or, in the case of multi-purpose facilities, (e.g., Community Centers, Combined Activity Centers, etc.) all program codes must be known, identified, and combined. Additionally, the contractor shall be provided a written statement from the DCSRM, coordinated with the DPCA, which outlines the level of APF support planned to be provided in the future for this program and facility. Accordingly, the PVA contractor will use this information to project the changes in NAF expenses needed to augment the APF support. This will have a direct effect on the ROI of the project.

h. Schedule H. The ROI template requires a "guess" as to the internal rate of return on the projected cashflows. An initial estimate of 10% (.10) has been entered in cell CN48 to give the spreadsheet an initial starting point to use in calculating the IRR. If "ERR" appears in cell CP48, change the estimate in .10 increments (e.g., .20, .30, etc.) until the spreadsheet calculates a plausible IRR. NOTE: Lotus 1-2-3 may not be able to calculate the internal rate of return on a project. For example, the internal rate of return for a youth activity center projected to annually break-even before depreciation. The net cashflow may be too small to calculate an IRR. The same holds true if the cashflow stream each year is negative, as no IRR can be calculated. If after inputting a few educated guesses as to the IRR in cell CN48 and you still can't get an IRR to appear in cell CP48, leave the estimate at .1 and the resulting "ERR." Also, if you

discover an estimate which calculates an obviously erroneous IRR - disregard it. Leave the estimate at .1 and the calculated IRR at "ERR."

- i. Schedule I: No input is necessary for this schedule.
- j. Schedule J: No input is necessary for this schedule.
- k. Schedule K: No input is necessary for this schedule.

l. Schedule L: This schedule produces a summarization of the pertinent project data from the template. The data on this schedule should be used in completing the required CIRB forms.

New Schedule

▲ m. Schedule M: This schedule uses data already entered in the ROI template to produce an IRR sensitivity analysis to changes (up or down) in the cost of constructing the project. This information may be helpful in projects that have some flexibility in the size/scope of the construction project. For changes in the cost of the project, the associated IRR will be automatically calculated.

F. PRINTING THE SCHEDULES

1. To facilitate printing the schedules, each schedule is assigned a range name, i.e., Schedule A, Schedule B, etc. When printing, you may select the page to print by using the range name assigned to the particular schedule. For example, using Windows commands:

To setup the page for printing - - click on the following with your left mouse button:

- a. "File"
- b. "Page Setup"
- c. "Size - fit all to page"
- d. "Orientation" - - select either portrait or landscape
- e. "OK"

To print the particular schedule - - click on the following with your left mouse button:

- a. "File"
- b. "Print"
- c. "Selected range" - - and type in the range name, i.e., Schedule A
- d. "OK"

You would then repeat the Print commands for all schedules you wish to print.

2. Alternate Printing - Built-in MACRO.

An alternative way to print all the schedules is by use of the built-in print-macro. If your version of Lotus supports the macro, then the following steps will print all of the schedules:

Use your "mouse" and left click on:	<i>Tools</i>
then left click on:	<i>Macro</i>
then left click on:	<i>Run</i>
then left click on:	<i>Print Schedules</i>
and finally, left click on:	<i>OK</i>

Note: Excel will support the built-in MACRO in a similar manner. If a dialogue box opens that asks if you want to use the MACRO, select the "Enable Macros" button. Selecting "Tools" then "Macro" then "Macros" then "Run" will allow printing.

G. Additional Information.

If any questions or comments arise on the use of the ROI template, please contact Mr. Chris Ryan, CFSC-FM-C, (703) 681-7305 or DSN 761-7305.